

What is claimed is:

1. An optical functional film comprising:

a multilayer film having a plurality of stacked films, wherein the plurality of films are formed of a same material, and refractive indices of adjacent ones of the plurality of films are different from each other.

2. An optical functional film according to claim 1, wherein stresses of prescribed ones of the plurality of films of the multilayer film have opposite signs with respect to adjacent ones of the plurality of films.

3. An optical functional film according to claim 1, wherein stresses of prescribed ones of the plurality of films of the multilayer film have opposite signs and an equal magnitude with respect to adjacent ones of the plurality of films.

4. An optical functional film according to claim 1, wherein said multilayer film is grown by chemical vapor deposition (CVD).

5. A method of forming an optical functional film comprising a multilayer film formed by stacking a plurality of films in CVD, said method including:

forming the plurality of films with a same material;
and

adjusting at least one of a frequency of a
radio-frequency voltage to be applied, an RF power, and
5 a gas flow rate ratio, on forming each of the films, to
control a stress and a refractive index of each of the
films so that refractive indices of adjacent films are
different from each other..

10 5. A method of forming an optical functional film
including a multilayer film which is formed by stacking
plural films by CVD, wherein a same material is used as
a raw material, and, in formation of each of said films,
a stress and a refractive index of said film are controlled
15 by adjusting at least one of a frequency of a
radio-frequency voltage to be applied, an RF power, and
a gas flow rate ratio, whereby adjacent films are formed
to have different refractive indices.

20 6. A spatial light modulator comprising:
a support substrate that has an electrode layer;
and

a movable thin film that has at least an electrode
layer, said movable thin film being opposingly placed
25 above said support substrate with being separated by a

predetermined gap distance in a manner that said movable thin film is flexurally deformable toward said support substrate,

wherein a predetermined driving voltage is applied
5 between said electrode layer of said support substrate and said electrode layer of said movable thin film to cause said movable thin film to be deflected toward said support substrate by an electrostatic force acting between
said electrode layers, whereby optical characteristics
10 of said device with respect to incident light are changed to perform light modulation on the incident light,

and wherein an optical functional film according to claim 1 is disposed on each of sides of said movable thin film and said support substrate, said sides being
15 opposed to each other, and said optical characteristics are optical interference characteristics corresponding to the gap distance between said movable thin film and said support substrate, and a wavelength of the incident light.

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7. A spatial light modulator array wherein plural spatial light modulators according to claim 6 are arranged one- or two-dimensionally.

25 8. An image forming device comprising:

a light source;

a spatial light modulator array according to claim
7;

an illumination optical system which illuminates
5 said spatial light modulator array with light from said
light source; and

a projection optical system which projects light
emitted from said spatial light modulator array onto an
image forming face.

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9. A flat panel display comprising:

a light source which emits ultraviolet rays;

a spatial light modulator array according to claim
7;

15 an illumination optical system which illuminates
said spatial light modulator array with light from said
light source; and

a fluorescent member which is excited by light
emitted from said spatial light modulator array to emit
20 light.